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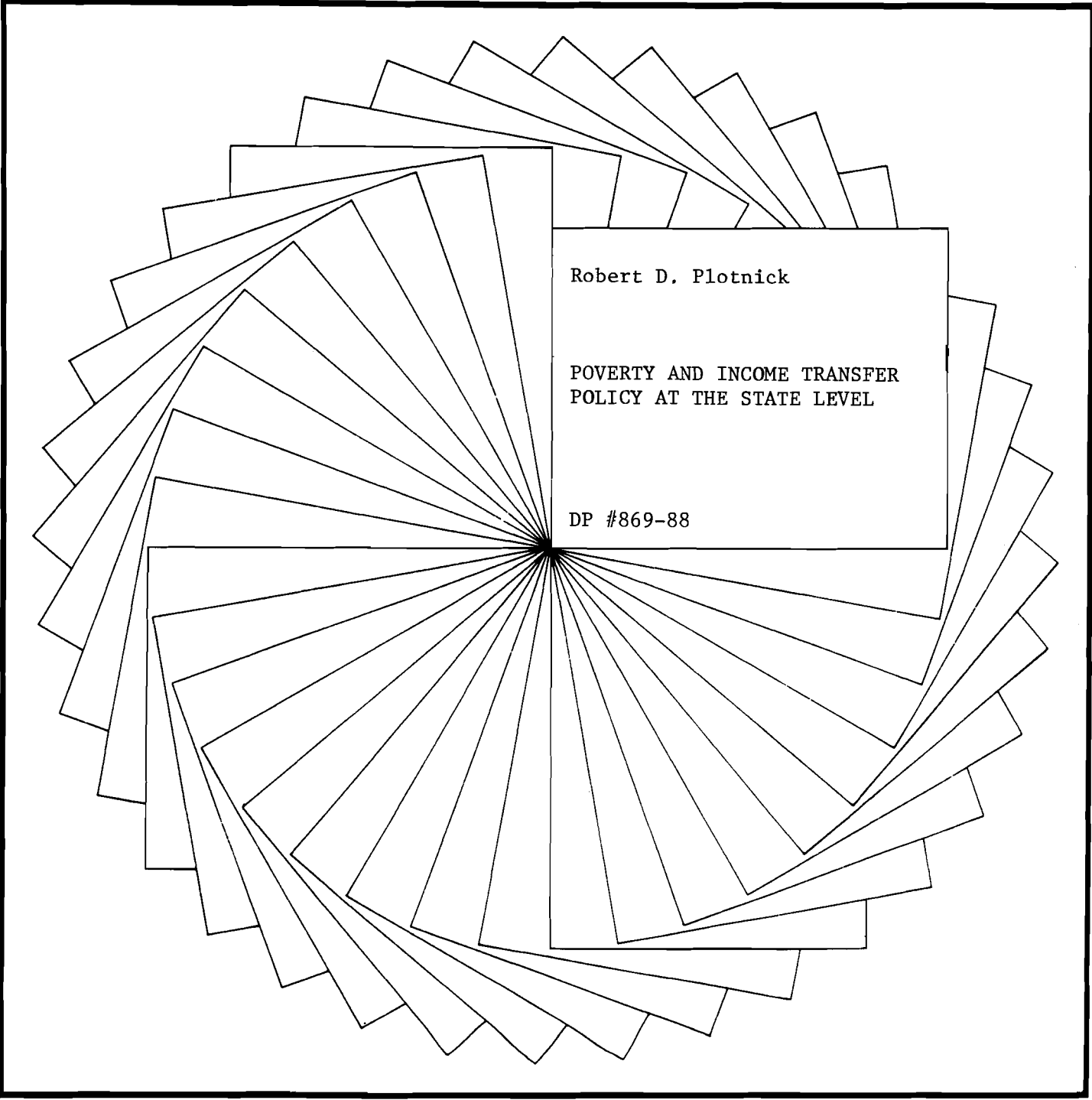# Institute for Research on Poverty

Discussion Papers

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POVERTY AND INCOME TRANSFER
POLICY AT THE STATE LEVEL

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POVERTY AND INCOME TRANSFER POLICY AT THE STATE LEVEL

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Abstract

Using data from the March Current Population Surveys, this paper provides mid-1980s poverty rates by state under four alternative measures of poverty: the official measure, prewelfare poverty, pretransfer poverty (federal and state transfers), and a new measure, pre-state-transfer poverty. It also analyzes state-by-state the antipoverty effectiveness of transfers.

The results show considerable variation in poverty rates across states. A regression model is developed to analyze the sources of these differences. Most of the variation in poverty rates can be accounted for by per capita personal income, unemployment, and demographic variables including age, sex, and education of family head.

POVERTY AND INCOME TRANSFER POLICY AT THE STATE LEVEL

Analyses of poverty and antipoverty policy usually take a national perspective.[1] State-by-state studies appear much less often. One reason is that policy proposals tend to focus on national approaches to poverty problems. A second important reason is the virtual lack of state data on poverty. The major source of state poverty data, the 1980 Census, provides information for income year 1979. This information has become badly outdated by the economic changes of the 1980s. The U.S. Bureau of the Census does not publish state estimates annually.

This paper presents state poverty data for the mid-1980s and develops a simple regression model that accounts for much of the differences in poverty among the states. The findings will be helpful to persons interested in poverty and income support policy at the state level. In addition, the poverty indexes may be useful explanatory variables in comparative state analyses of policy issues.

The paper first describes how the data were developed. It then explains the four alternative poverty measures used in the analysis, including one that appears for the first time in this paper, and the different types of information they yield.[2] The findings include a descriptive table of poverty indexes, the regression model, and a comparison of the antipoverty impact of states' income support policies.

DATA AND METHODS

The national and regional poverty data annually published by the Bureau of the Census come from the March Current Population Survey (CPS), which contains information from the previous calendar year. CPS

samples at the state level are relatively small: less than 1000

households are interviewed in most states. As a result, the estimated

state poverty rates for any single year may be subject to significant

sampling error. The standard errors of Danziger and Ross's estimated

1985 rates ranged from 0.75 to 2.30 percentage points. By contrast, the

standard errors for poverty rates by region, which the Census Bureau

does publish, range from 0.4 to 0.5 percentage points.

To develop the estimates here, this study pools the March CPS

tapes for 1985, 1986, and 1987. These provide income data for calendar

years 1984, 1985, and 1986. The advantage of pooling is that it doubles

the effective sample size.[3] This leads to more stable estimates and

about a 30 percent reduction in the standard error of each estimate.[4]

The disadvantage of pooling is that one does not have a separate poverty

rate for each of the three years. Instead, one obtains the average

level of poverty during the three middle years of the 1980s.

During these years the national economy steadily expanded, real

per capita income grew, the unemployment rate declined, and inflation

moderated. The national poverty rate smoothly declined from 14.4

percent in 1984 to 14.0 in 1985 and to 13.6 in 1986. It is likely,

then, that for most states year-to-year changes in poverty were also

gradual and moderate. On balance the improvement in precision from the

larger sample more than compensates for the lack of year-specific

poverty rates. Further, the large standard errors for each state for a

single year make year-to-year comparisons by state quite problematic,

even in those cases where state economic trends diverged from the

national ones.

The poverty lines used here are the official lines that the Bureau of the Census updates and maintains. They vary by the size of the family, the number of related children, and the age of the household head. For example, in 1985 the poverty lines ranged from $5,156 for an elderly person living alone to $22,083 for a family of nine of more with at least one child under 18. The poverty line for a family of four was $10,989. The lines increase each year to match the rate of inflation as measured by the Consumer Price Index.

Poverty rates are estimated by comparing the income of a family (or unrelated individual, considered a one-person family) to its corresponding poverty line. If income is below the poverty line, then all the persons in that family are counted as poor. The base for the rates reported here is the total number of persons--not family units --in a state.

To obtain four alternative measures of poverty, this study uses the official lines but varies the definition of income. The first measure uses the official measure of money income and, therefore, is simply the familiar official measure of poverty. "Money income" includes all cash income from labor market earnings, dividends, interest, rent, pensions, government income-support programs, and any other periodic income source. Capital gains are not counted, nor are taxes deducted. Noncash forms of income such as fringe benefits or government benefits from food stamps or Medicare are not counted.[5]

The official measure does not separate market and private transfer-income sources from government sources. As such, it does not separate the market economy's antipoverty performance from the performance of the entire society, including government transfer

programs. Suppose, for example, one wanted to know the antipoverty impact of a state's public assistance (welfare) programs.[6] The official measure would not provide this information.

To obtain it, one must derive prewelfare poverty. Prewelfare poverty shows the percentage of people who are poor before welfare is added to their other sources of income. (Other sources would include private sources of income plus any social insurance benefits.) The prewelfare poor need welfare to escape poverty. By comparing the level of prewelfare poverty with the official level, one can measure the antipoverty effect of the cash welfare programs. Since states are responsible for setting benefit levels and, within federal guidelines, eligibility rules of their welfare programs, this gives a useful way to compare the antipoverty effects of state welfare systems.[7]

By comparing prewelfare poverty to the official poverty measure to assess the antipoverty impact of welfare, one implicitly is assuming that welfare induces no behavioral responses that would cause incomes without welfare to deviate from observed prewelfare incomes. However, welfare does induce some declines in work effort, so recipients' net incomes are not increased by the full amount of the transfer benefit they receive (Danziger, Haveman, and Plotnick, 1981). Also, availability of welfare leads some persons (e.g., young single mothers) to live independently but in prewelfare poverty, whereas without this availability they might have remained in a larger family that was not prewelfare poor (Ellwood and Bane, 1985). Measured prewelfare poverty, then, is likely to be greater than the level that really would exist in the absence of welfare. Therefore, the difference between prewelfare

and official poverty provides upper-bound estimates of welfare's antipoverty effect.

Comparisons across states of the antipoverty effect of welfare programs are probably not greatly distorted by neglecting these responses, however. States with more generous programs will show a larger antipoverty impact when the responses are not accounted for. It is true that such states' programs would induce larger behavioral responses, leading to a larger difference between observed prewelfare poverty and the level that really would exist in the absence of welfare. But since each dollar of welfare benefits reduces prewelfare income by less than a dollar, even if the responses were accounted for, more generous states' welfare programs would still show a larger impact on poverty.[8]

States also control the administration and benefit levels of two important social insurance programs, Unemployment Insurance and Workers' Compensation. Suppose one wanted to assess the antipoverty effect of all income support programs subject to state policy. To do so, one would need information on pre-state-transfer poverty. Pre-state-transfer income includes all private sources of income plus any fully federal social insurance income, but excludes Unemployment Insurance, Workers' Compensation, and public assistance income. (The federal social insurance transfers are Social Security and veterans' disability compensation and pensions.) Pre-state-transfer poverty shows how much poverty is left for state transfer programs to relieve after markets distribute private incomes and the fully federal transfer programs deliver their benefits. A comparison of the level of pre-state-transfer

poverty with the official level provides a measure of the antipoverty effect of a state's income support policies.

Studies of national poverty and the antipoverty impact of transfers have not presented pre-state-transfer poverty data and, thus, have not examined state policy impacts. This paper contains the first published pre-state-transfer poverty statistics.[9]

To assess the effect of the entire federal-state transfer system, those studies derived pretransfer poverty data. The pretransfer poor do not have enough income from private sources to be above the poverty line. At the state level, information on pretransfer poverty shows how well the state's economy succeeds in keeping residents from having to rely on federal or state income support to keep out of poverty. By comparing the level of pretransfer poverty with the official level, one can gauge the antipoverty effect of the combined federal-state income maintenance system.

For assessing the antipoverty effect of state transfer policy, pre-state-transfer poverty is more useful than pretransfer poverty. However, because pretransfer poverty statistics have appeared in many poverty studies and may still be of interest at the state level, this paper provides them as well.

FINDINGS

Level of Poverty

Table 1 contains the basic data on the incidence of official, prewelfare, pre-state-transfer, and pretransfer poverty by state, including the District of Columbia, arranged according to the nine

Table 1

Poverty Rates for Persons by State, Mid-1980s

	OFFICIAL POOR	PREWELFARE POOR	PRE-STATE-TRANSFER POOR	PRETRANSFER POOR
New England				
Maine	11.1	12.1	13.3	20.2
	(1.30)	(1.35)	(1.41)	(1.66)
New Hampshire	5.6	6.1	6.7	13.2
	(1.05)	(1.10)	(1.15)	(1.55)
Vermont	10.2	11.4	12.1	18.2
	(1.31)	(1.38)	(1.42)	(1.67)
Massachusetts	8.8	9.9	10.5	16.9
	(0.58)	(0.61)	(0.63)	(0.77)
Rhode Island	11.2	12.1	12.7	20.7
	(1.42)	(1.47)	(1.50)	(1.83)
Connecticut	7.2	7.3	7.9	13.6
	(0.97)	(0.97)	(1.01)	(1.28)
Mid-Atlantic				
New York	15.2	16.6	17.3	23.9
	(0.53)	(0.55)	(0.56)	(0.63)
New Jersey	9.5	10.3	10.7	17.0
	(0.58)	(0.60)	(0.61)	(0.74)
Pennsylvania	12.4	13.5	14.8	24.0
	(0.63)	(0.65)	(0.68)	(0.82)
East North Central				
Ohio	12.4	12.9	13.9	20.9
	(0.66)	(0.67)	(0.69)	(0.81)
Indiana	12.2	12.5	13.1	19.9
	(1.06)	(1.07)	(1.09)	(1.30)
Illinois	15.0	15.8	16.7	22.1
	(0.73)	(0.75)	(0.77)	(0.85)
Michigan	14.4	15.6	16.5	22.6
	(0.72)	(0.74)	(0.76)	(0.85)
Wisconsin	11.8	13.4	13.9	20.5
	(1.22)	(1.29)	(1.31)	(1.53)

- Table, Continued -

Table 1, Continued

	OFFICIAL POOR	PREWELFARE POOR	PRE-STATE-TRANSFER POOR	PRETRANSFER POOR
West North Central				
Minnesota	11.5	12.2	12.7	18.7
	(1.25)	(1.28)	(1.30)	(1.53)
Iowa	16.5	17.0	18.1	24.2
	(1.43)	(1.45)	(1.49)	(1.65)
Missouri	14.3	14.8	15.7	23.3
	(1.20)	(1.22)	(1.25)	(1.45)
North Dakota	14.9	15.3	16.2	21.6
	(1.37)	(1.38)	(1.41)	(1.58)
South Dakota	16.2	16.5	17.2	24.0
	(1.38)	(1.39)	(1.41)	(1.60)
Nebraska	14.6	14.7	15.2	21.4
	(1.38)	(1.39)	(1.41)	(1.61)
Kansas	11.2	12.1	12.8	18.7
	(1.19)	(1.23)	(1.26)	(1.47)
South Atlantic				
Delaware	11.3	11.7	11.9	18.3
	(1.27)	(1.29)	(1.30)	(1.56)
Maryland	8.5	8.8	9.2	15.2
	(0.94)	(0.96)	(0.98)	(1.21)
District of Columbia	19.2	19.9	20.4	27.9
	(1.53)	(1.55)	(1.56)	(1.74)
Virginia	10.6	11.3	11.8	18.4
	(1.13)	(1.16)	(1.18)	(1.42)
West Virginia	22.8	23.7	27.5	39.0
	(1.61)	(1.64)	(1.72)	(1.88)
North Carolina	14.0	14.9	15.7	22.8
	(0.70)	(0.72)	(0.74)	(0.85)
South Carolina	17.6	18.3	19.1	26.0
	(1.42)	(1.44)	(1.46)	(1.63)
Georgia	15.6	16.3	17.3	23.5
	(1.36)	(1.39)	(1.42)	(1.59)
Florida	13.3	13.9	14.7	24.3
	(0.71)	(0.73)	(0.75)	(0.90)

- Table, Continued -

Table 1, Continued

	OFFICIAL POOR	PREWELFARE POOR	PRE-STATE-TRANSFER POOR	PRETRANSFER POOR
East South Central				
Kentucky	18.5	19.3	21.5	29.5
	(1.54)	(1.57)	(1.63)	(1.81)
Tennessee	17.8	19.1	20.4	28.2
	(1.52)	(1.56)	(1.60)	(1.78)
Alabama	21.5	22.0	23.0	31.7
	(1.83)	(1.84)	(1.87)	(2.07)
Mississippi	25.6	27.3	28.6	35.4
	(1.71)	(1.74)	(1.76)	(1.87)
West South Central				
Arkansas	22.4	23.6	25.5	33.5
	(1.60)	(1.63)	(1.67)	(1.81)
Louisiana	20.8	21.6	23.9	29.6
	(1.57)	(1.59)	(1.65)	(1.76)
Oklahoma	15.5	16.0	16.9	23.6
	(1.37)	(1.39)	(1.42)	(1.61)
Texas	16.2	16.7	17.6	22.4
	(0.77)	(0.78)	(0.80)	(0.87)
Mountain				
Montana	16.3	16.8	17.9	24.6
	(1.29)	(1.31)	(1.34)	(1.51)
Idaho	16.4	16.6	17.6	24.6
	(1.45)	(1.46)	(1.49)	(1.69)
Wyoming	12.3	12.8	14.3	20.7
	(1.49)	(1.51)	(1.58)	(1.83)
Colorado	10.8	11.1	12.0	16.8
	(1.33)	(1.35)	(1.40)	(1.60)
New Mexico	20.7	21.4	22.6	28.0
	(1.56)	(1.58)	(1.61)	(1.73)
Arizona	13.4	13.6	14.1	21.5
	(1.50)	(1.51)	(1.53)	(1.81)
Utah	11.9	12.4	13.5	18.2
	(1.31)	(1.34)	(1.39)	(1.57)
Nevada	12.4	12.8	13.5	17.8
	(1.62)	(1.64)	(1.68)	(1.88)

- Table, Continued -

Table 1, Continued

	OFFICIAL POOR	PREWELFARE POOR	PRE-STATE-TRANSFER POOR	PRETRANSFER POOR
Pacific				
Washington	11.7	12.4	13.5	19.6
	(1.34)	(1.38)	(1.43)	(1.66)
Oregon	12.6	13.2	14.7	21.8
	(1.42)	(1.45)	(1.52)	(1.77)
California	13.4	15.1	15.7	20.9
	(0.55)	(0.58)	(0.59)	(0.66)
Alaska	10.4	11.8	12.6	15.3
	(1.49)	(1.58)	(1.63)	(1.76)
Hawaii	9.9	10.6	11.4	14.9
	(1.15)	(1.19)	(1.23)	(1.38)
United States	14.0	14.9	15.8	22.4
	(0.16)	(0.16)	(0.16)	(0.19)

Source: Computations from the March 1985, 1986 and 1987 Current Population Survey computer tapes.

Note: Standard errors in parentheses.

Census Bureau sub-regions. The standard error associated with each estimate is also given.[10] The sizes of the errors imply that one should exercise caution in the interpretation of small differences between states.[11] Table 2 has summary statistics based on Table 1.

The official poverty rate ranged from 5.6 percent in New Hampshire to 25.6 percent in Mississippi. The median was 13.4 percent while the interquartile range spanned 11.2 to 16.3 percent. Only five states had an official poverty rate below 10 percent. Figure 1 maps the official state poverty rates.

By construction, the other poverty measures are larger in each state. Prewelfare poverty ranged from 6.1 to 27.3 percent around a median of 13.9 percent. Pre-state-transfer poverty ranged from 6.7 percent to 28.6 percent around a median of 14.8 percent. And pretransfer poverty varied from 13.2 percent to 39.0 percent with a median of 21.6 percent.

New Hampshire had the lowest value under all four measures. Mississippi had the largest incidence of official, prewelfare, and pre-state-transfer poverty, but West Virginia had the largest incidence of pretransfer poverty. The simple correlations among the four poverty measures are very high. All exceed 0.95.

States with poverty measures substantially below average tend to cluster along the northern and central Atlantic coast and in the Pacific region. Those substantially above average are mostly in the South Atlantic, East South Central and West South Central regions.[12] There are, of course, exceptions to this tendency. New York, for example, has above-average levels of poverty, while Colorado is well below average.

Table 2

Summary Statistics for State Poverty Rates

Measure	Lowest Rate	Highest Rate	Median	Mean	Interquartile Range
Official	5.6	25.6	13.4	14.1	11.2 to 16.3
Prewelfare	6.1	27.3	13.9	14.9	12.1 to 16.7
Pre-State-Transfer	6.7	28.6	14.8	15.8	12.7 to 17.6
Pretransfer	13.2	39.0	21.6	22.4	18.4 to 24.3

Correlation Coefficients

	Official	Prewelfare	Pre-State-Transfer
Prewelfare	.996		
Pre-State-Transfer	.991	.995	
Pretransfer	.956	.958	.969

Source: Computed from Table 1.

Figure 1

Decile Distribution of Poverty Rates across States

Note: The different shadings represent (roughly) decile groups of
states; e.g., white indicates the ten states with the lowest poverty
rates, and the darkest shading indicates the ten with highest rates.
The scale shows the range of rates covered by each shading.

Percent Population in Poverty
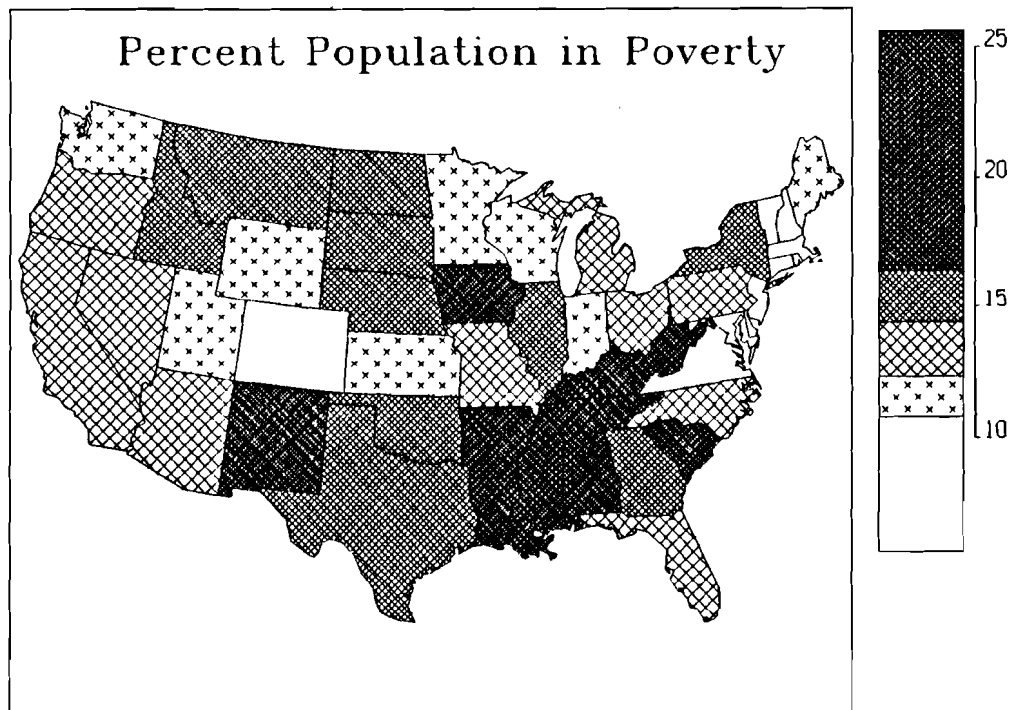
Seventeen states scored below 90 percent of the average under all four measures. They are New Hampshire, Vermont, Massachusetts, Connecticut, New Jersey, Indiana, Minnesota, Kansas, Delaware, Maryland, Virginia, Colorado, Utah, Nevada, Washington, Alaska, and Hawaii. The twelve states that scored above 110 percent of the average on all four include the District of Columbia, West Virginia, South Carolina, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Montana, Idaho, and New Mexico.

## A Simple Model of Determinants of State Poverty Rates

Much of the variation in poverty rates across states can be accounted for by a few basic economic and demographic variables. This study's simple regression model of state poverty rates focuses on six key factors: per capita personal income, unemployment, educational level, and the race, sex, and age composition of a state's population.

Figure 2 illustrates the rationale for this approach. I_j represents the distribution of personal income among state j's population, with a mean of I. P is the poverty line. The area to the left of P indicates the extent of poverty. For a state with a higher mean income but the same distribution, a smaller proportion of its population would fall below P.

Now, consider state k where the proportion of its population living in families headed by black, female, or poorly educated persons is greater than the average. Because of discrimination, meager marketable skills, and other factors, such families tend to be concentrated toward the bottom of the income distribution. Holding mean income constant, this must mean that the income distribution is more

Figure 2

Poverty and the Distribution of Income
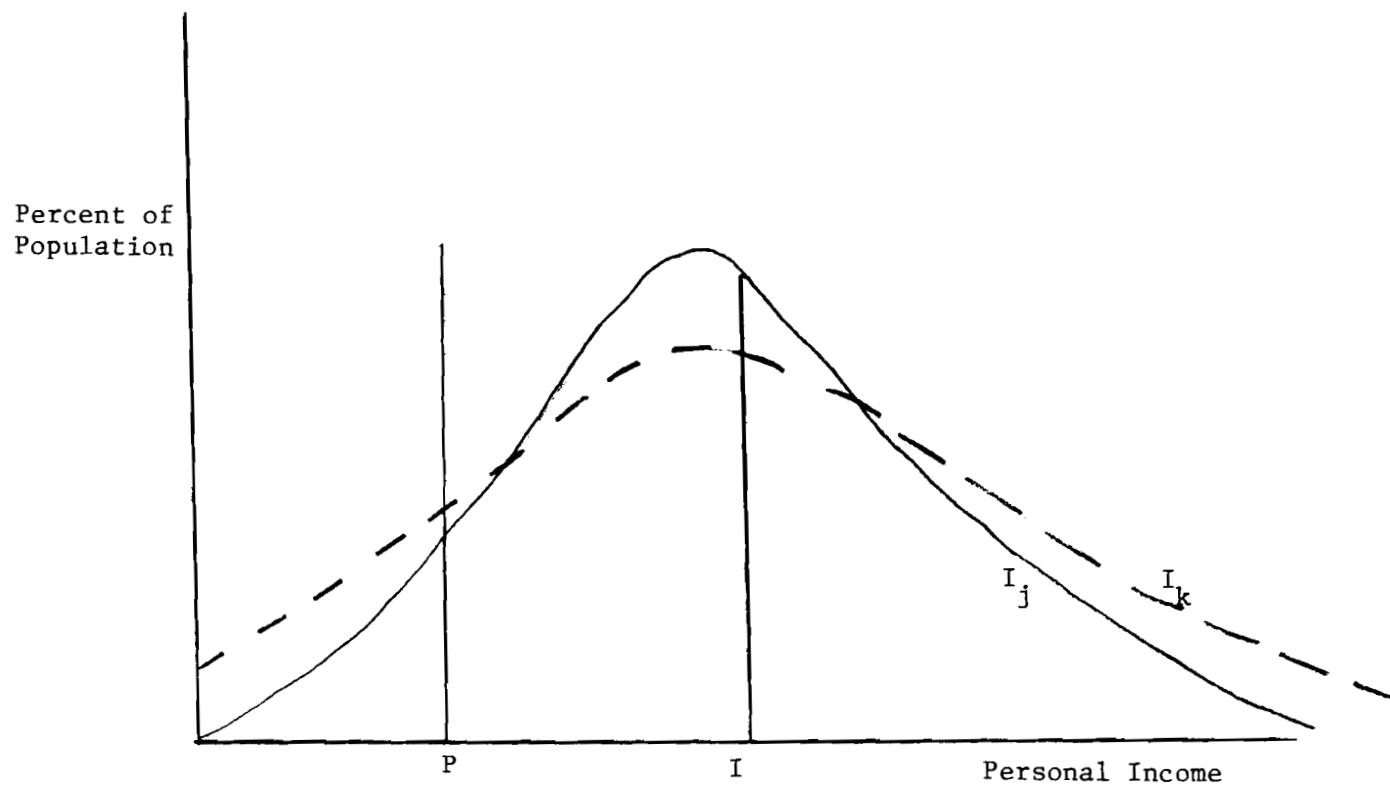
unequal in state k. This is shown by distribution I_k. In such a state, a higher proportion of the population will be poor. A similar conclusion applies to states with higher than average levels of unemployment.

To estimate this model the independent variables are per capita personal income (measured in thousands of dollars), the state unemployment rate, and the percentages of persons living in a family where the head has less than 12 years of schooling, where the head is black, and where the head is female. As Figure 2 suggests, one expects the income variable to have a negative coefficient and the unemployment, education, race, and sex variables to have positive coefficients.

In addition, the model includes the percentage of persons living in a family where the head is 65 or older. Expectations for this variable are less firm than for the three other demographic variables. If the data were from the 1970s or earlier, one would routinely expect a positive coefficient. But since 1982 the elderly have been slightly less likely to be poor than the nonelderly, so one might expect a small negative coefficient, but it may well be statistically insignificant.[13]

Because the black and female family-head variables are highly correlated (r = 0.86), the final estimates omitted the black variable. The official poverty rate is the dependent variable. Regression results, with estimated standard errors in parentheses, are:

Poverty = 13.03 - 1.02 Income/capita + .88 Unemp. Rate
          (3.20)   (.16)   (.16)

+ .12 % Educ < 12 + .28 % Female - .01 % Aged, R^2 = .81
  (.06)   (.09)   (.14)

The estimates are consistent with expectations. Per capita income has a strong negative relationship with the poverty rate. The unemployment, education, and female variables have the expected positive coefficients. Three of these four coefficients are statistically significant at the 1 percent level. The coefficient on education is significant at the 5 percent level. The variable for the aged population has a small negative coefficient, which is plausible, but it does not remotely approach statistical significance. This simple model accounts for 81 percent of the variance in official poverty rates.[14]

Parallel estimates with prewelfare or pre-state-transfer poverty as the dependent variable were also produced. The sizes and significance levels of the coefficients on all five independent variables and the R^2s were similar to those reported above. When pretransfer poverty was analyzed, the results for the income, unemployment, female, and education variables again were similar. But the age variable was now positive and statistically significant at the 1 percent level. This is not inconsistent with the insignificant coefficients on this variable in regressions with the other three poverty measures. Those three measures are based on income concepts that include federal Social Security benefits, which mainly reduces poverty among the aged. Pretransfer poverty, however, is measured before Social Security income is counted. One might therefore expect the age variable to have a significant positive impact on pretransfer poverty, since the aged generally have low levels of pretransfer income. This is what appeared in the results.[15]

Antipoverty Impact of Transfers

Table 3 presents the impact of state income transfers on poverty. Column one shows the antipoverty effect of cash welfare as the percentage difference between a state's prewelfare and official poverty rates. Column two shows the antipoverty effect of all cash transfers under control of state government as the percentage difference between the pre-state-transfer and official poverty rates.

In the median state, welfare reduced poverty by 4.1 percent. The antipoverty impacts of welfare vary substantially, however. The maximum impact is 11.9 percent (Alaska and Wisconsin); the minimum is merely 0.7 percent (Nebraska). The interquartile range covers 3.1 to 7.4 percent. All state-controlled cash transfers reduce poverty by 10.5 percent in the median state. Again, the range of impacts is wide. The maximum is 17.5 percent (Alaska); the minimum is 4.0 percent (Nebraska). The interquartile range covers 8.2 to 13.3 percent. Not surprisingly, the correlation between the antipoverty impacts of welfare and of all state transfers is positive, with a value of 0.78.

CONCLUSION

Newly developed data on state poverty rates and the antipoverty impact of state income support policies show wide differences among the states. The findings will be helpful to persons interested in comparative state policy issues. Most of the variation in poverty rates can be accounted for by per capita personal income, unemployment, and a handful of demographic variables. The information and simple initial

Table 3

Antipoverty Impact of Cash Transfers by State in the Mid-1980s

	Percentage of persons taken out of poverty by welfare[a]	Percentage of persons taken out of poverty by all state cash transfers[b]
New England		
Maine	8.3	16.5
New Hampshire	8.2	16.4
Vermont	10.5	15.7
Massachusetts	11.1	16.2
Rhode Island	7.4	11.8
Connecticut	1.4	8.9
Mid-Atlantic		
New York	8.4	12.1
New Jersey	7.8	11.2
Pennsylvania	8.2	16.2
East North Central		
Ohio	3.4	10.8
Indiana	2.4	6.9
Illinois	5.1	10.2
Michigan	7.7	12.7
Wisconsin	11.9	15.1
West North Central		
Minnesota	5.7	9.5
Iowa	2.9	8.8
Missouri	3.4	8.9
North Dakota	2.6	8.0
South Dakota	1.8	5.8
Nebraska	0.7	4.0
Kansas	7.4	12.5

- Table, Continued -

Table 3, Continued

	Percentage of persons taken out of poverty by welfare[a]	Percentage of persons taken out of poverty by all state cash transfers[b]
South Atlantic		
Delaware	3.4	5.0
Maryland	3.4	7.6
District of Columbia	3.5	5.9
Virginia	6.2	10.2
West Virginia	3.8	17.1
North Carolina	6.0	10.8
South Carolina	3.8	7.9
Georgia	4.3	9.8
Florida	4.3	9.5
East South Central		
Kentucky	4.2	14.0
Tennessee	6.8	12.8
Alabama	2.3	6.5
Mississippi	6.2	10.5
West South Central		
Arkansas	5.1	12.2
Louisiana	3.7	13.0
Oklahoma	3.1	8.3
Texas	3.0	8.0
Mountain		
Montana	3.0	8.9
Idaho	1.2	6.8
Wyoming	3.9	14.0
Colorado	2.7	10.0
New Mexico	3.3	8.4
Arizona	1.5	5.0
Utah	4.0	11.9
Nevada	3.1	8.2

- Table, Continued -

Table 3, Continued

	Percentage of persons taken out of poverty by welfare[a]	Percentage of persons taken out of poverty by all state cash transfers[b]
Pacific		
Washington	5.7	13.3
Oregon	4.6	14.3
California	11.3	14.7
Alaska	11.9	17.5
Hawaii	6.6	13.2
United States	6.0	11.4

[a]Defined as (prewelfare - official)/prewelfare.

[b]Defined as (prestate - official)/prestate.

analyses in this paper take but the first steps toward a more complete understanding of the differences among states in these important social indicators.

APPENDIX: Computing Standard Errors of Poverty Rates

The state poverty rates are subject to two sources of error: first, because a sample is taken to represent all persons; second, because of nonsampling errors in response, processing, and systematic bias in the data. The extent of nonsampling error is not known, but the standard errors shown in Table 1 indicate the extent of sampling error and the effect of some response and processing errors.

The formula for computing standard errors of state estimates from the usual one-year CPS sample is:

S.E. =   sqrt (f[(b/x) . p(100 - p)])

where x = estimated number of persons in the state, taken from the CPS data, p = estimated percentage of persons who are poor in the state, f = the state-specific factor given by the Census Bureau for 1985, and b = a parameter given by the Census Bureau to be used in computing standard errors of percentages. (The formula and state-specific factors are from private communication with the Bureau of the Census. Formulas for other standard errors appear in the appendix to the Census Bureau's Series P-60 reports.) Since the sample in this work is double the usual one-year size, it is necessary to double x in calculating the standard errors.

Notes

[1]See Duncan (1984), Danziger (1988) or Danziger, Haveman and Plotnick (1986) for representative studies in this tradition.

[2]Other papers with state poverty data for the 1980s (Danziger and Ross, 1987; Plotnick and Danziger, 1988) used only one poverty measure, the official one.

[3]The sample does not triple because of the nature of the CPS. Each household which enters the CPS sample is interviewed for four consecutive months, omitted from interviews for the next eight months, again interviewed for four months, then dropped from the sample. Thus, half of the households interviewed in March 1985 would be in their first four months in the CPS and would again be interviewed in March 1986, during their last four months. Similarly, half of the households in the March 1987 CPS would have also been interviewed in the March 1986 CPS.

To obtain a data set in which all observations are independent of each other, I dropped from the March 1985 data all households that would also be in the March 1986 data. I also dropped from the March 1987 data households that already appeared in the March 1986 CPS. As a result the March 1985 and 1987 CPSs each added half their samples to the full 1986 CPS.

[4]The formula for computing standard errors of poverty rates from the CPS shows that doubling the sample size reduces its standard error by a factor equal to the inverse of the square root of 2. This is .71, or a 29 percent decline. The formula appears in the Appendix of this article.

[5]The Bureau of the Census now publishes national poverty estimates based on an income measure that includes the value of selected noncash transfers (U.S. Bureau of the Census, 1987b). The adjustments to CPS data needed to replicate these estimates at the state level are beyond the scope of this study.

[6]These are Aid to Families with Dependent Children (AFDC), Supplemental Security Income (SSI), and General Assistance. SSI, the welfare program for the aged, blind and disabled, has a federally financed minimum benefit which states are free to supplement. Most do so. Because of this option, it is appropriate to view SSI benefits as under state control and regard it as part of a state's welfare policy.

[7]In a comparative state analysis of welfare or related policies, the level of prewelfare poverty would be a better indicator of need than the more often used level of official poverty, since the former measures need before the benefits of welfare are counted while the latter does not.

[8]Parallel comments apply to the concepts of pre-state-transfer and pretransfer poverty, discussed below, and their use in assessing the antipoverty impact of transfers.

[9]It also contains the only state-level prewelfare and pretransfer poverty data. The state-level studies noted above only gave official poverty rates.

[10]See Appendix for the formula for standard errors.

[11]Poverty rates for demographic groups within states (e.g., for the aged or persons in single-parent families, or by race) would have even higher standard errors and, thus, were not developed in this study.

[12]Substantially below (above) is defined here as at least 10 percent below (above) the average across the 51 units.

[13]The demographic variables are computed from the merged CPS data set. The income variable is 1985 state per capita personal income, taken from Bureau of Economic Analysis data in the April 1988 Survey of Current Business. The unemployment rates are for 1985 and appear in U.S. Bureau of the Census (1987a), p. 393. The dependent variable comes from Table 1, of course. Means, with standard deviations in parentheses, for the variables are: official poverty 14.1% (4.2%); income, $13,298 ($2,188); unemployment rate, 7.1% (1.9%); black family head, 10.9% (12.9%); female family head, 19.9% (4.2%); family head with 0-11 years of schooling, 24.5% (7.0%); and aged family head, 13.7% (2.4%).

[14]Findings were similar when the race variable replaced the sex variable, and the race variable was significant in the expected direction. When both were entered together, neither was significant.

[15]Copies of these other results are available upon request. In addition, similar regressions were estimated with a logistic transformation of the dependent variable ($\ln[p/[100 - p]]$, where p is the poverty rate measured in percentage terms). This transformation changes the dependent variable from one which is bounded by zero and 100 to one with no upper or lower bound. Results were consistent with those based on the standard dependent variables and are also available upon request.

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